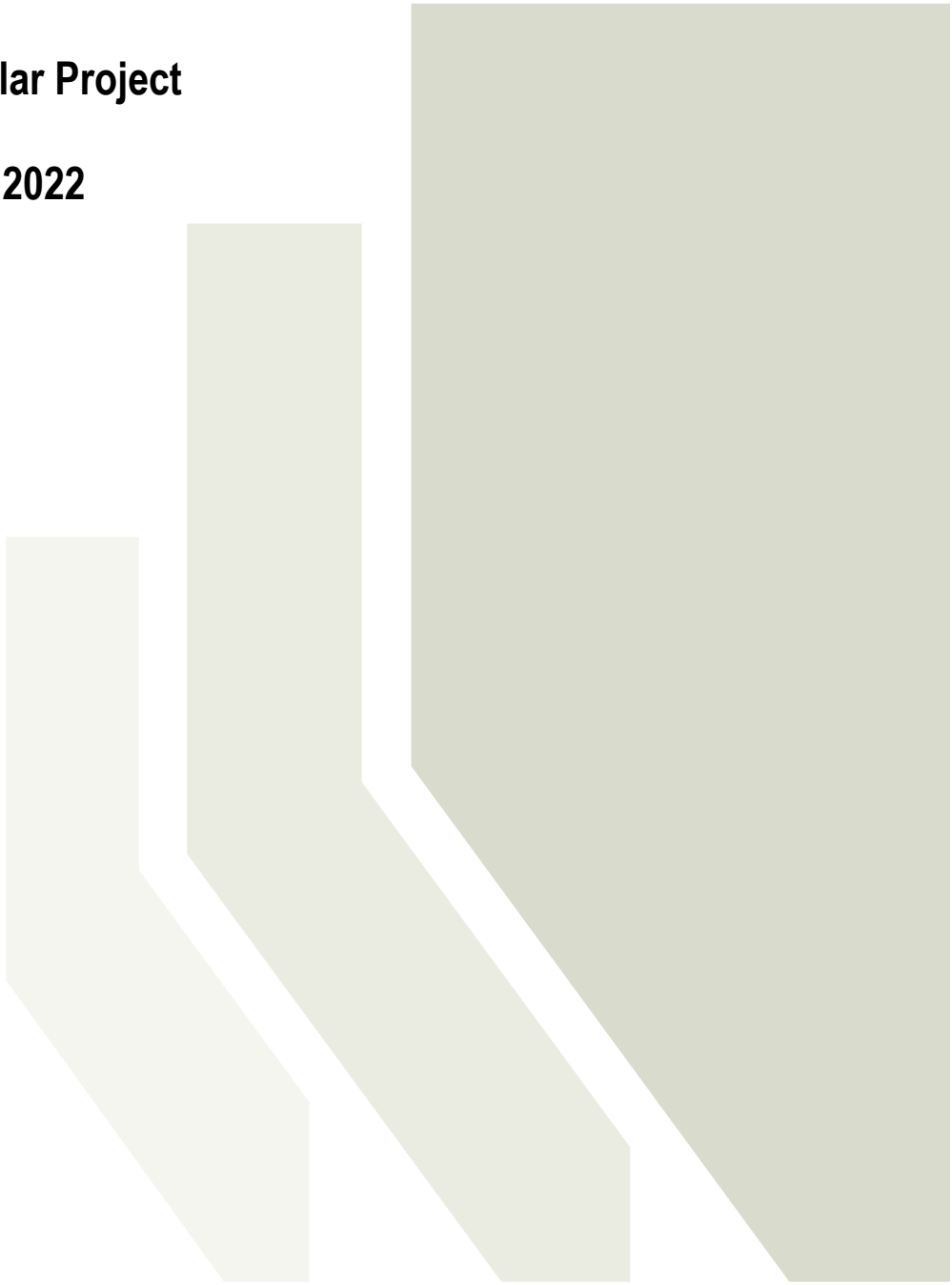




ATCO Power (2010) Ltd.

Deerfoot Solar Project

January 10, 2022



Alberta Utilities Commission

Decision 26892-D01-2022

ATCO Power (2010) Ltd.

Deerfoot Solar Project

Proceeding 26892

Applications 26892-A001 and 26892-A002

January 10, 2022

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1 Decision summary

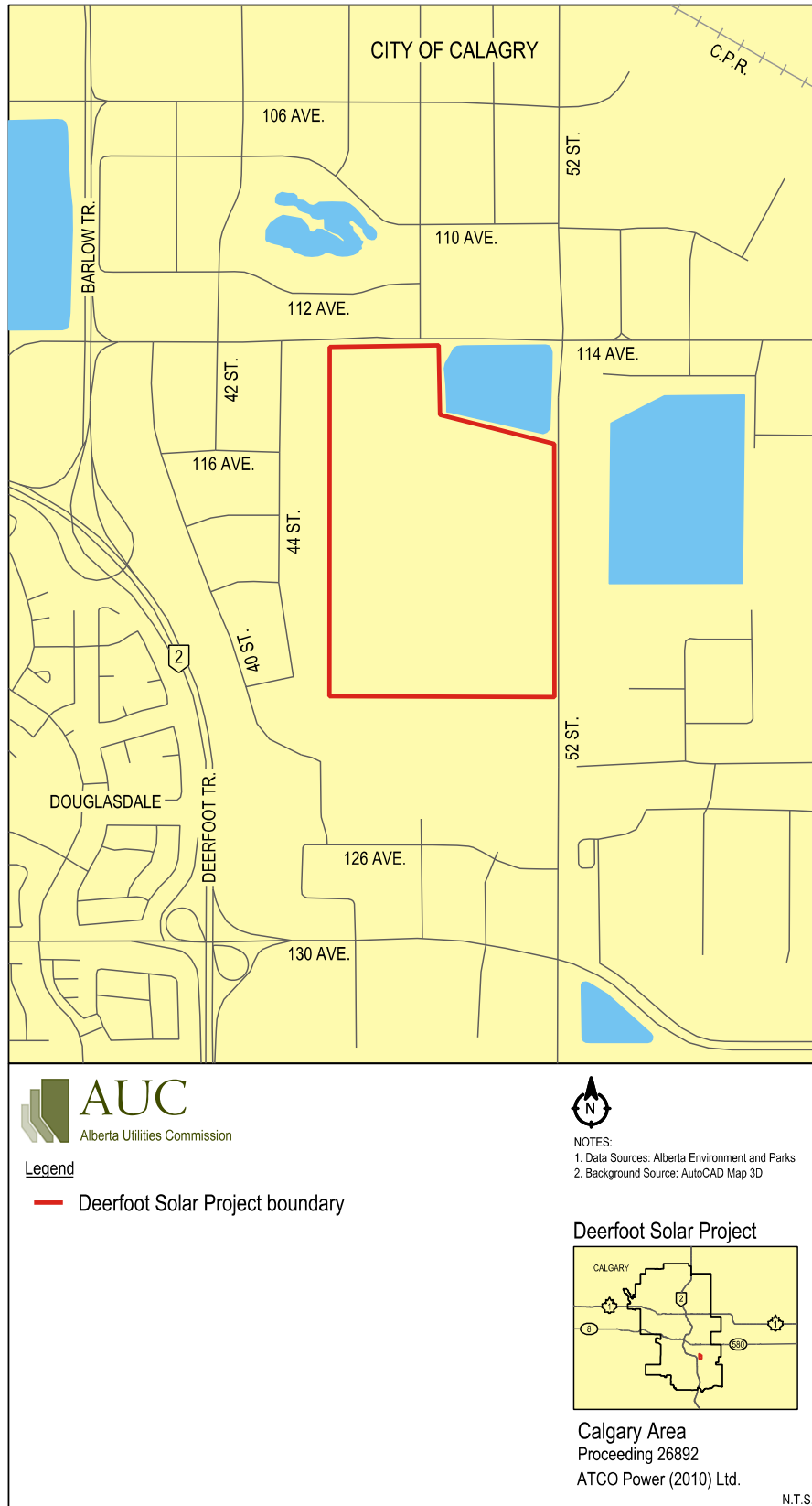
1. In this decision, the Alberta Utilities Commission approves applications from ATCO Power (2010) Ltd. to construct, operate and connect a 37-megawatt (MW) solar power plant, designated as the Deerfoot Solar Project, located in the city of Calgary.

2 Applications

2. ATCO Power (2010) Ltd. filed applications with the Commission for approval to construct and operate the power plant, and connect it to the ENMAX Power Corporation electric distribution system (collectively, the project). The power plant consists of rack-mounted solar photovoltaic modules and 12 inverter/transformer stations.

3. The project is sited on 244 acres of private, freehold land in the northeast and southeast quarters of Section 10, Township 23, Range 29, west of the Fourth Meridian, as shown on the map in Figure 1. ATCO proposed to interconnect the power plant to the ENMAX Power Corporation electric distribution system in Legal Subdivision 15, Section 10, Township 23, Range 29, west of the Fourth Meridian.

Figure 1. Proposed Deerfoot Solar Project location



4. ATCO's applications included:
- A participant involvement program summary, which details consultation with stakeholders within 800 metres of the project and notification to stakeholders within 2,000 metres of the project.¹
 - An environmental assessment and conservation and reclamation plan for the project which: described baseline environmental conditions and associated surveys or studies; identified potential environmental impacts from the project; and, described mitigation to prevent or limit those impacts.²
 - A letter from Alberta Environment and Parks (AEP) which stated that “[the project] is within the urban limits of the City of Calgary, Alberta; therefore a review and referral report provided by an AEP-FWS Wildlife Biologist is not required for the project.”³
 - A letter from Stantec Consulting Ltd. which commented on ATCO's risk management plan for the phosphogypsum stacks in the project footprint.⁴ The letter stated that the human health and ecological risk assessment components of the risk management plan for the phosphogypsum stacks do not require revision to accommodate the installation of a solar energy facility.
 - A noise impact assessment summary form, which concluded that the project would comply with Rule 012: *Noise Control*.⁵
 - A solar glare impact assessment, which predicted that glare from the project is not likely to have the potential to create hazardous glare conditions for nearby dwellings or transportation routes.⁶
 - *Historical Resources Act* approval dated August 6, 2021.⁷
 - A site specific emergency response plan for the construction and operation of the project.⁸
 - Correspondence from ENMAX Power Corporation, confirming that it is prepared to allow the interconnection of the power plant to its distribution system provided that ATCO can demonstrate compliance with all applicable rules, standards and ENMAX's interconnection requirements.⁹

¹ Exhibit 26892-X0019, Attachment 17 – 20200429 PIP Summary.

² Exhibit 26892-X0013, Attachment 11 – 210914 – Deerfoot Solar EEA Final.

³ Exhibit 26892-X0015, Attachment 13 – Deerfoot Solar_DP Energy Urban Area_ 2021-07-23.

⁴ Exhibit 26892-X0011, Attachment 9 – Viterra_Risk_Management_Plan_Review.

⁵ Exhibit 26892-X0014, Attachment 12 – NIA Appendix 3 (2021.09.15) v1.0.

⁶ Exhibit 26892-X0012, Attachment 10 – SGHAR (2021.09.15) v1.0.

⁷ Exhibit 26892-X0016, Attachment 14 – Signed_HRA_Response.

⁸ Exhibit 26892-X0009, Attachment 7 – Corporate Emergency Response Plan.

⁹ Exhibit 26892-X0008, Attachment 6 – ENMAX Letter – Deerfoot Solar Park - signed.

5. ATCO expects to start construction by March 2022 with an in-service date of December 30, 2022. However, ATCO requested a construction completion date of June 30, 2023, to provide a buffer for potential delays in procurement.
6. The Commission issued a notice of applications and no submissions were received in response to the notice.

3 Discussion and findings

7. For the reasons outlined below, the Commission finds that approval of the project is in the public interest having regard to the social, economic, and other effects of the project, including its effect on the environment.
8. The Commission has reviewed the applications and has determined that the information requirements specified in Rule 007: *Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations, Hydro Developments and Gas Utility Pipelines* have been met.
9. The previous owner of the project, DP Energy, undertook a participant involvement program (PIP), beginning December 2019. The PIP consisted of notification of landowners within 2,000 metres of the project boundary (via a postal drop), personal consultation with landowners within 800 metres of the project, and a public open house. After ATCO acquired the project, it sent out a project update notification on September 27, 2021, to landowners within 800 metres of the project area.¹⁰ Some residences within 800 metres, that are located across Highway 2, were not included in the notification by ATCO and contact information was not provided. Those residences were later included as part of the notice of applications issued by the Commission. No statements of intent to participate were received by the Commission. The Commission finds that the participant involvement program requirements under Rule 007 are satisfied.
10. ATCO stated that the project is located on top of capped phosphogypsum stacks in an area zoned for industrial development, that has limited development potential. It submitted that the project would not disturb the integrity of the phosphogypsum stacks and no excavation would occur within the phosphogypsum stacks area. ATCO confirmed that it would continue to meet the obligations associated with the existing *Environmental Protection and Enhancement Act* approval, including the required monitoring, for the life of the project.
11. The Commission notes that AEP did not prepare a renewable energy referral report for this project, given its location within Calgary city limits and that the *Wildlife Directive for Alberta Solar Energy Projects* does not apply to projects in urban areas. The AEP project review letter states that AEP supports the siting and development of solar projects within urban areas because urban solar projects have limited impact to wildlife and wildlife habitat, have reduced requirements for transmission infrastructure, and reduce development pressure in locations with

¹⁰ On September 1, 2021, the notification boundary requirement changed from 2,000 metres to 800 metres in the current version of Rule 007.

higher quality wildlife habitat.¹¹ The Commission accepts that a renewable energy referral report is not required and agrees with ATCO that the site avoids proximity to known wildlife habitat.

12. The Commission has reviewed the environmental evaluation, including the proposed mitigation measures, and considers that ATCO's applications address all the environmental information requirements of Rule 007. The Commission is satisfied that with diligent implementation of the mitigation measures outlined and adherence to the commitments made by ATCO, including its commitment to apply applicable standards and best management practices, the identified environmental effects of the project can be mitigated to an acceptable degree.

13. ATCO retained Green Cat Renewables Canada Corporation (Green Cat) to assess solar glare from the project. Green Cat identified six dwellings, six transportation routes (Deerfoot Trail and five local roads) and a heliport (Calgary Eastlake Heliport) as receptors. The solar glare impact assessment indicated that the project's solar panels would be mounted on a racking system with a fixed-tilt angle of 25 degrees and assumed that the project would use anti-reflective coating on the solar panels.

14. The solar glare impact assessment predicted that vehicle operators on the Deerfoot-to-Barlow ramp would experience up to 79 hours of yellow glare¹² per year, and the nearby dwellings would experience up to 71 hours of yellow glare per year from the project. Green Cat explained that the actual glare that would be experienced by vehicle operators is anticipated to be only a fraction of the predicted duration, because vehicle operators will be travelling past the project site, not standing still while in the vicinity of the solar arrays. Green Cat further explained that outdoor obstructions (e.g., buildings), which were not considered in the glare model, are likely to screen most of the glare predicted on neighbouring roads and dwellings.

15. The solar glare assessment predicted that glare from the project would affect the southeast quadrant of the heliport, and the most affected flight path (i.e., the path with a 120 degree approach angle) would experience up to 66 hours of yellow glare per year. Green Cat stated that glare from the project would not be a safety risk to helicopter pilots based on the following analysis:

- i. an affected helicopter would only observe glare for a short period during the final descent, as it will be flying through the impacted area toward the heliport
- ii. a pilot can completely avoid glare when using other approach angles, as a helicopter can approach a heliport from any angle and adjust its approach based on conditions
- iii. aviation sunglasses would likely be able to reduce all of the glare from yellow level glare to green level glare
- iv. the heliport is privately owned and infrequently used by the owner (i.e., less than five times per year)

¹¹ Exhibit 26892-X0015, Attachment 13 – Deerfoot Solar_DP Energy_Urban Area_2021-07-23.

¹² The solar glare assessment used colour codes to categorize effects of glare to a person's eyes. Green glare: glare with low potential for temporary after-image; Yellow glare: glare with potential for temporary after-image; Red glare: glare with potential for permanent eye damage.

16. In summary, the solar glare assessment concluded that the project is not likely to create hazardous glare conditions for nearby dwellings, transportation routes or the heliport.

17. ATCO emailed a copy of the solar glare impact assessment to the owner of the heliport and made several attempts to contact the owner. ATCO did not receive questions or concerns from the owner of the heliport, but remains open to discussion if questions or concerns are raised. ATCO also sent a copy of the application material to Transport Canada.

18. The Commission notes that the solar glare impact assessment used conservative assumptions and accepts the conclusion in the assessment that the project is not likely to create hazardous glare conditions for nearby receptors. In particular, the Commission finds that Green Cat's analysis about potential glare impacts from the project on the Calgary Eastlake Heliport is reasonable, and accepts that glare from the project is unlikely to be a safety risk to pilots that use the heliport. The Commission further notes the presence of commercial buildings and a noise wall between residences and the power plant, which would mitigate glare.

19. The Commission acknowledges that the solar glare assessment was premised upon the use of anti-reflective coating, and therefore imposes the following condition of approval:

- a. ATCO Power (2010) Ltd. shall use anti-reflective coating on the project solar panels.

20. While no objections to the project were raised by the heliport's owner, Transport Canada or other stakeholders, the Commission requires that any glare issues associated with the project that may arise be addressed by ATCO in a timely manner. Accordingly, the Commission imposes the following condition of approval:

- b. ATCO Power (2010) Ltd. shall file a report with the Commission detailing any complaints or concerns it receives or is made aware of regarding solar glare from the project during its first year of operation, as well as its response to the complaints or concerns. ATCO shall file this report no later than 13 months after the project becomes operational.

21. Green Cat conducted a noise impact assessment on behalf of ATCO, which concluded that noise from the project would be compliant with applicable permissible sound levels set out in Rule 012. The Commission has reviewed the noise impact summary form and accepts that the project will comply with Rule 012.

22. The Commission notes that ATCO has not finalized its selection of equipment for the project, including solar modules, inverters and transformers. Consequently, the Commission imposes the following condition of approval:

- c. Once ATCO Power (2010) Ltd. has finalized its equipment selection and project layout, it must file a final project update to the Commission to confirm that the project has stayed within the final project update specified allowances for solar power plants. The final project update must be filed at least 90 days prior to the start of construction.

23. The Commission finds that the project has met all requirements for a connection order. ENMAX Power Corporation has confirmed it is willing to allow the interconnection of the power plant, and there are no outstanding concerns around the interconnection.

24. The Commission considers the applications to be in the public interest in accordance with Section 17 of the *Alberta Utilities Commission Act*.

4 Decision

25. Pursuant to Section 11 of the *Hydro and Electric Energy Act*, the Commission approves Application 26892-A001 and grants ATCO Power (2010) Ltd., the approval set out in Appendix 1 – Power Plant Approval 26892-D02-2022, to construct and operate the Deerfoot Solar Project.

26. Pursuant to Section 18 of the *Hydro and Electric Energy Act*, the Commission approves Application 26892-A002 and grants ATCO Power (2010) Ltd., the approval set out in Appendix 2 – Connection Order 26892-D03-2022, to connect the Deerfoot Solar Project to the ENMAX Power Corporation electric distribution system.

27. The appendices will be distributed separately.

Dated on January 10, 2022.

Alberta Utilities Commission

(original signed by)

Cairns Price
Commission Member

Appendix A – Summary of Commission conditions of approval in the decision

This section is intended to provide a summary of all conditions of approval specified in the decision for the convenience of readers. Conditions that require subsequent filings with the Commission will be tracked as directions in the AUC's eFiling System. In the event of any difference between the conditions in this section and those in the main body of the decision, the wording in the main body of the decision shall prevail.

The following is a condition of Decision 26892-D01-2022 that requires subsequent filings with the Commission and will be included as a condition of Power Plant Approval 26892-D02-2022:

- Once ATCO Power (2010) Ltd. has finalized its equipment selection and project layout, it must file a final project update to the Commission to confirm that the project has stayed within the final project update specified allowances for solar power plants. The final project update must be filed at least 90 days prior to the start of construction.

The following are conditions of Decision 26892-D01-2022 that do not require subsequent filings with the Commission and will be included as conditions of Power Plant Approval 26892-D02-2022:

- ATCO Power (2010) Ltd. shall file a report with the Commission detailing any complaints or concerns it receives or is made aware of regarding solar glare from the project during its first year of operation, as well as its response to the complaints or concerns. ATCO shall file this report no later than 13 months after the project becomes operational.
- ATCO Power (2010) Ltd. shall use anti-reflective coating on the project solar panels.